

REMARKS

The Office Action mailed November 30, 2004, has been carefully reviewed and the following remarks and amendment have been made in consequence thereof.

Claims 6, 7, and 9-16 are pending in this application and Claims 6-16 are rejected. Claims 1-5 and 8 have been canceled.

The rejection of Claims 6-16 under 35 U.S.C. 102(b) as being anticipated by Hodgens, II, et al. (4,713,120) is respectfully traversed.

Hodgens, II et al. describe a composition and method for removing deposits (10) from internal components (24) of a gas turbine engine (18). Specifically, Hodgens, II et al. describe inserting a spray probe 20 through a boroscope port 21 to inject two solutions into engine (18). A first solution is a cleaning composition (15) formed from an aqueous solution, and is injected into the flowpath to loosen deposits (10) formed along the flowpath within engine (18). A second solution is a rinse solution (16) that is injected into engine (18) to facilitate removing both the cleaning composition (15) and loosened deposits. Notably, Hodgens, II et al. do not utilize an anti-static liquid to reduce a rate of formation of particulate matter within the gas turbine engine.

Claim 6 recites an apparatus for a gas turbine engine comprising “a washing system comprising a pump in flow communication with at least one nozzle and a reservoir comprising a first fluid, said washing system configured to inject said first fluid and a second fluid into the gas turbine engine, at least one of the first and second fluids configured to facilitate reducing a rate of formation of particulate matter within the gas turbine engine, said first fluid is an anti-static liquid.”

Hodgens, II et al. do not describe nor suggest an apparatus for a gas turbine engine including a washing system that includes a reservoir including an anti-static liquid, wherein the washing system is configured to facilitate reducing a rate of formation of particulate matter within the gas turbine engine. Specifically, Hodgens, II et al. do not describe nor suggest injecting an anti-static liquid into the engine. Moreover, Applicants respectfully submit that repeated injections of a cleaning solution, and/or the injection of a rinse solution,

is not inherently analogous to injecting a solution into the engine that is designed to facilitate reducing a rate of formation of particulate matter by suppressing electrostatic attraction of particulate materials to the blades. Specifically, at Column 1, lines 42-44, for example, Hodgens, II et al. state that the exact nature of the chemical bond is unknown. Accordingly, for at least the reasons set forth above, Claim 6 is submitted to be patentable over Hodgens, II et al.

Claim 8 has been canceled. Claims 7 and 9-11 depend from independent Claim 6. When the recitations of Claims 7 and 9-11 are considered in combination with the recitations of Claim 6, Applicants submit that dependent Claims 7 and 9-11 likewise are patentable over Hodgens, II et al.

Claim 12 recites a gas turbine engine washing system configured to reduce particulate matter within the gas turbine engine, the gas turbine engine including a compressor, wherein the washing system comprises: “a reservoir comprising a fluid...a nozzle in flow communication with said reservoir and for injecting said fluid into said the gas turbine engine upstream from said compressor, wherein said fluid is configured to reduce electrostatic attraction within the gas turbine engine.”

Hodgens, II et al. do not describe nor suggest a gas turbine engine washing system configured to reduce particulate matter within the gas turbine engine, wherein the system includes a reservoir including a fluid that is configured to reduce electrostatic attraction within the gas turbine engine. Moreover, Applicants respectfully submit that repeated injections of a cleaning solution, and/or the injection of a rinse solution, is not inherently analogous to injecting a solution into the engine that is designed to facilitate reducing a rate of formation of particulate matter by suppressing electrostatic attraction of particulate materials to the blades. Specifically, at Column 1, lines 42-44, for example, Hodgens, II et al. state that the exact nature of the chemical bond is unknown. Accordingly, for at least the reasons set forth above, Claim 12 is submitted to be patentable over Hodgens, II et al.

Claims 13-16 depend from independent Claim 12. When the recitations of Claims 13-16 are considered in combination with the recitations of Claim 12, Applicants submit that dependent Claims 13-16 likewise are patentable over Hodgens, II et al.

Accordingly, and for at least the reasons set forth above, Applicants respectfully request the Section 102 rejection of claims 6-16 be withdrawn.

The rejection of Claims 6-16 under 35 U.S.C. 102(b) as being anticipated by Bartos, et al. (4,059,123) is respectfully traversed.

Bartos, et al. describe a self-contained turbine engine cleaning and preservation unit 10. Unit 10 includes a water reservoir 18, a preservative reservoir 20, and a solvent reservoir 24. Solvent reservoir 24 contains a cleaning solution, and preservative reservoir 20 contains a preservation solution for protecting engine components from rust.

Claim 6 recites an apparatus for a gas turbine engine comprising “a washing system comprising a pump in flow communication with at least one nozzle and a reservoir comprising a first fluid, said washing system configured to inject said first fluid and a second fluid into the gas turbine engine, at least one of the first and second fluids configured to facilitate reducing a rate of formation of particulate matter within the gas turbine engine, said first fluid is an anti-static liquid.”

Bartos et al. do not describe nor suggest an apparatus for a gas turbine engine including a washing system that includes a reservoir including an anti-static liquid, wherein the washing system is configured to facilitate reducing a rate of formation of particulate matter within the gas turbine engine. Specifically, Bartos et al. do not describe nor suggest injecting an anti-static liquid into the engine. Moreover, Applicants respectfully submit that injecting a rust inhibitor into the engine, is not analogous to injecting a fluid into the engine to facilitate reducing a rate of formation of particulate matter by suppressing electrostatic attraction of particulate to the blades. Accordingly, for at least the reasons set forth above, Claim 6 is submitted to be patentable over Bartos et al.

Claim 8 has been canceled. Claims 7 and 9-11 depend from independent Claim 6. When the recitations of Claims 7 and 9-11 are considered in combination with the recitations of Claim 6, Applicants submit that dependent Claims 7 and 9-11 likewise are patentable over Bartos et al.

Claim 12 recites a gas turbine engine washing system configured to reduce particulate matter within the gas turbine engine, the gas turbine engine including a compressor, wherein the washing system comprises: “a reservoir comprising a fluid...a nozzle in flow communication with said reservoir and for injecting said fluid into said the gas turbine engine upstream from said compressor, wherein said fluid is configured to reduce electrostatic attraction within the gas turbine engine.”

Bartos et al. do not describe nor suggest a gas turbine engine washing system configured to reduce particulate matter within the gas turbine engine, wherein the system includes a reservoir including a fluid that is configured to reduce electrostatic attraction within the gas turbine engine. Specifically, Bartos et al. do not describe nor suggest injecting an anti-static liquid into the engine. Moreover, Applicants respectfully submit that injecting a rust inhibitor into the engine, is not analogous to injecting a fluid into the engine to facilitate reducing a rate of formation of particulate matter by suppressing electrostatic attraction of particulate to the blades. Accordingly, for at least the reasons set forth above, Claim 6 is submitted to be patentable over Bartos et al.

Claims 13-16 depend from independent Claim 12. When the recitations of Claims 13-16 are considered in combination with the recitations of Claim 12, Applicants submit that dependent Claims 13-16 likewise are patentable over Hodgens, II et al.

Accordingly, for at least the reasons set forth above, Claims 6-16 is submitted to be patentable over Bartos, et al.

Claims 7-16 depend from independent Claim 6. When the recitations of Claims 7-16 are considered in combination with the recitations of Claim 6, Applicants submit that dependent Claims 7-16 likewise are patentable over Bartos, et al.

For at least the reasons set forth above, Applicants respectfully request that the 35 U.S.C. 102(b) rejection of Claims 6-16 be withdrawn.

In view of the foregoing amendments and remarks, all the claims now active in this application are believed to be in condition for allowance. Reconsideration and favorable action is respectfully solicited.

Respectfully Submitted,



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